IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of: **Alain DELACHE et al.** Group Art Unit: **3743**

Serial Number: **10/506,979** Examiner: **Nihir B. Patel**

Filed: **September 8, 2004** Confirmation Number: **6948**

For: **APPARATUS TO ASSIST A PATIENT'S BREATHING WITH A VARIABLE RAMP PERIOD TO RISE TO TREATMENT PRESSURE**

Attorney Docket Number: **062219**
Customer Number: **38834**

SUBMISSION OF APPEAL BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

September 1, 2006

Sir:

Applicants submit herewith an Appeal Brief in the above-identified U.S. patent application.

Attached please find a check in the amount of $250.00 to cover the cost for the Appeal Brief. If any additional fees are due in connection with this submission, please charge Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

Stephen G. Adrian
Attorney for Appellants
Registration No. 32,878
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

SGA/arf/mra

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

APPEAL BRIEF FOR THE APPELLANT

Ex parte Alain DELACHE et al. (Applicant)

APPARATUS TO ASSIST A PATIENT'S BREATHING WITH A VARIABLE RAMP PERIOD TO RISE TO TREATMENT PRESSURE

Serial Number: 10/506,979

Filed: September 8, 2004

Appeal No.:

Group Art Unit: 3743

Examiner: Nihir B. Patel

Submitted by:
Stephen G. Adrian
Registration No. 32,878
Attorney for Appellants

WESTERMAN, HATTORI,
DANIELS & ADRIAN, LLP
1250 Connecticut Avenue NW, Suite 700
Washington, D.C. 20036
Tel (202) 822-1100
Fax (202) 822-1111

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BRIEF ON APPEAL

(I) REAL PARTY IN INTEREST

The real party in interest is **KAERYS S.A.**, by an assignment recorded in the U. S. Patent and Trademark Office on **September 8, 2004**, at Reel 016492, Frame 0771-773.

(II) RELATED APPEALS AND INTERFERENCES

There are no other prior or pending appeals, interferences or judicial proceedings known to appellant, appellant's legal representative, or assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(III) STATUS OF CLAIMS

Claims 9-17 are pending and appealed. Claims 1-8 have been canceled. Claims 9-17 are rejected.

(IV) STATUS OF AMENDMENTS

An Amendment After Final Rejection was filed on March 28, 2006, requesting grammatical amendments of claim 9. However, the Examiner refused to enter the proposed amendments as allegedly raising new issues. The appealed claims contained in the appendix do not contain the proposed amendments which were refused entry by the Examiner.

(V) SUMMARY OF THE CLAIMED SUBJECT MATTER

The claimed invention as set forth in independent claim 9, is directed to an apparatus to assist a patient's respiration by delivering air to a patient through a mask 20. With respect to Fig. 1, claim 9 requires a blower 4 to provide the patient with air under a treatment pressure, a control unit 2 to adjust the pressure delivered by said blower 4 at the level of said mask 20, a ramp module 10 connected to the control unit 2 in order to provide the control unit 2 with a value of P_M to settle at said mask 20, so that when said apparatus starts functioning, the pressure progressively rises until the pressure of treatment P_T, the rise of pressure until the pressure of treatment P_T corresponding to a ramp period, and a comparator (not illustrated, but which can be included in the control unit 2 (see page 4, lines 20-22)) connected to the ramp module 10, at least one means for detecting the patient's breathing parameters during said ramp period and sending them to said comparator such that the comparator is able during this said ramp period to determine whether an event (E_1, E_2 or E_3) occurs in patient's breathing based on said breathing parameters and to send the corresponding data to the ramp module 10 which provides the control unit 2 with a value of pressure P_M that will speed up with respect of time during this said ramp period, so that the rise of pressure at patient's mask is accelerated within the same said ramp period. The at least one means for detecting the patient's breathing parameters and sending them to said comparator can be a pressure sensor 6 or any other way to evaluate or measure the patient's air flow. Such detection can be given by air flow sensors which provide the control unit

with pressure parameters, the control unit being able to detect that an event is occurring (see page 4, lines 7-12).

(VI) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellants request review of the rejection of claims 9-17 under 35 USC §102(e) as being anticipated by Matthews et al. (US 2004/0187870).

(VII) ARGUMENT

Independent Claim 9

Matthews et al. fails to teach each and every limitation required by claim 9. As such, the rejection under 35 USC §102(e) over Matthews et al. should be reversed.

Claim 9 requires a control unit 2 to adjust the pressure delivered by said blower at the level of said mask. The Examiner asserts that this limitation is met by the request processor 106 of Matthews et al. The request processor 106, however, does not adjust the pressure delivered by said blower at the level of said mask. Instead, Matthews et al. teaches that the request processor 106 determines whether control should be turned over to the control module associated with the

monitoring module making the request (see paragraph [0071]). As further described by Matthews et al. in paragraph [0072], once a controller in a control layer is activated, it controls the operation of the pressure support system and maintains control until the condition that activated the controller is resolved or a higher priority controller takes over. Thus, the request processor 106 does not correspond to a control unit to adjust the pressure delivered by said blower at the level of said mask.

Matthews et al. also fails to teach a ramp module connected to the control unit in order to provide the control unit with a value of pressure P_M to settle at said mask. The Examiner argues that Fig. 2 and page 6, paragraph [0080], meet this limitation of claim 9. However, paragraph [0080] of Matthews et al. teaches a ramp control 118. As shown in Fig. 2 of Matthews et al., the ramp controller 118 is connected to the request processor 106. The request processor 106, as discussed above, does not have the ability to adjust the pressure delivered by said blower at the level of said mask. The request processor 106 only rules which module will get control of pressure delivery. All the detection modules, monitoring modules and the ramp module are organized by layers set in a hierarchical order. Each control layer competes for control of the pressure support system. The request processor 106 provides control to the module which is highest in the hierarchy.

The ramp controller 118 of Matthews et al. does not provide the request processor 106 with a value of pressure P_M to settle at said mask. As noted above, the request processor merely determines which module is provided control. Thus, Matthews et al. does not teach a ramp module connected to the control unit in order to provide the control unit with a value of pressure P_M to settle at said mask as required by claim 9.

Matthews et al. also fails to teach a comparator as required by claim 9. Claim 9 requires a comparator connected to the ramp module, at least one means for detecting the patient's breathing parameters during said ramp period and sending them to said comparator such that the comparator is able during this said ramp period to determine whether an event occurs in patient's breathing based on said breathing parameters and to send the corresponding data to the ramp module which provides the control unit with a value of pressure P_M that will speed up with respect of time during this said ramp period, so that the raise of pressure at patient's mask is accelerated within the same said ramp period. Matthews et al. merely discloses a conventional ramp control such that the ramp control layer does not cooperate with any of the detection layers. When the ramp is activated, any control request sent by any detection module is blocked by control unit 106 and is not transmitted to the ramp module. The ramp module 118 of Matthews et al, unlike the claimed invention, is not able to modify the ramping rise of pressure within the

ramp period. As described in paragraph [0081] of Matthews et al., when ramp controller 118 assumes control, it overrides the current pressure delivered to the patient and controls pressure generating system 32 so that relatively low pressure is delivered to the patient. It is only after the ramp duration that the pressure ramp control is released so that another control layer takes over. Nowhere does Matthews et al. teach or suggest the features of the claimed comparator which allows the rise of pressure at patient's mask to be accelerated within the ramp period upon determining whether an event occurs during the ramp period.

During the ramp period, the pressure applied to the patient rises progressively up to the pressure of treatment. The apparatus of Matthews et al. does not teach that during the ramp period, data are sent to a comparator which determines when an event occurs and, which during this ramp period, provides the control unit with a pressure value that will accelerate the rise of pressure at patient's mask.

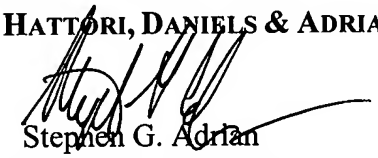
CONCLUSION

For all the foregoing reasons, the Honorable Board is requested to reverse the rejection of the Examiner.

If this paper is not timely filed, appellants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to Deposit Account No. 50-2866, along with any other additional fees that may be required with respect to this paper.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Stephen G. Adrian
Attorney for Applicants
Registration No. 32,878
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

SGA/arf

(VIII) CLAIMS APPENDIX

1 – 8 (Canceled)

9. An apparatus to assist a patient's respiration by delivering air to a patient through a mask, comprising:

a blower to provide the patient with air under a treatment pressure,

a control unit to adjust the pressure delivered by said blower at the level of said mask,

a ramp module connected to the control unit in order to provide the control unit with a value of pressure P_M to settle at said mask, so that when said apparatus starts functioning, the pressure progressively rises until the pressure of treatment P_T, the rise of pressure until the pressure of treatment P_T corresponding to a ramp period; and

a comparator connected to the ramp module, at least one means for detecting the patient's breathing parameters during said ramp period and sending them to said comparator such that the comparator is able during this said ramp period to determine whether an event (E_1, E_2 or E_3) occurs in patient's breathing based on said breathing parameters and to send the corresponding data to the ramp module which provides the control unit with a value of pressure P_M that will

speed up with respect of time during this said ramp period, so that the rise of pressure at patient's mask is accelerated within the same said ramp period.

10. The apparatus according to claim 9, wherein said ramp module provides the value of pressure P_M being a linear function of time wherein an increase coefficient K_{RP} is constant, said ramp module increasing that coefficient of a constant value K_E when the control unit sends a data corresponding to said event (E_1, E_2 or E_3).

11. The apparatus according to claim 9, wherein the value of pressure P_M has always maximum and/or minimum limits so that the increase of pressure is also limited in minimum and/or maximum.

12. The apparatus according to claim 10, wherein said ramp module comprises a memory where a minimum coefficient K_{SRP} is stored, said ramp module always maintaining the coefficient K_{SRP} equal or greater than said minimum coefficient K_{SRP}, so that the ramp module provides the control unit with a value of pressure P_M always greater than a minimum limit.

13. The apparatus according to claim 10, wherein said ramp module comprises a memory where a maximum coefficient K_{MRP} is stored, said ramp module always maintaining the coefficient K_{RP} equal or less than said maximum coefficient K_{MRP}, so that the ramp module provides the control unit with a value of pressure P_M always less than a maximum limit.

14. The apparatus according to claim 9, wherein said means for detecting the patient's breathing parameters enable the control unit to compute the airflow at patient's mask, said comparator determining whether an event (E_1, E_2 or E_3) is occurring with the airflow parameters or shape.

15. The apparatus according to claim 9, wherein the ramp module increases the value of pressure P_M when an anomaly in patient's breathing is detected.

16. The apparatus of claim 15, wherein said anomaly is either snoring or apnea.

17. (Previously Presented) The apparatus according to claim 9, wherein the ramp module increases the value of pressure P_M when the patient's breathing parameters correspond to a drop between awake breathing and asleep breathing or when they correspond to a stable frequency of breathing.

(IX) EVIDENCE APPENDIX

None

(X) RELATED PROCEEDINGS APPENDIX

None